

REMARKS

Claims 1-20 are pending in the application.

Claims 1-20 have been rejected.

Claims 1, 9 and 15 are amended herein.

Claims 1-20 remain pending in this application.

Reconsideration of the claims is respectfully requested.

I. CLAIM REJECTION UNDER 35 U.S.C. §102

Claims 1-2, 4-7, 9-10, 12-16 and 18-20 were rejected under 35 U.S.C. §102(e) as being anticipated by U.S. Patent Application Publication No. 2003/0175037 to *Kimmitt, et al.*, hereinafter “*Kimmitt*”. This rejection is respectfully traversed.

A prior art reference anticipates the claimed invention under 35 U.S.C. §102 only if every element of a claimed invention is identically shown in that single reference, arranged as they are in the claims. MPEP §2131, p. 2100-67 (8th ed., rev. 5, August 2006) (*citing In re Bond*, 910 F.2d 831, 832, 15 U.S.P.Q.2d 1566, 1567 (Fed. Cir. 1990)). Anticipation is only shown where each and every limitation of the claimed invention is found in a single prior art reference. *Id.* (*citing Verdegaal Bros. v. Union Oil Co. of California*, 814 F.2d 628, 631, 2 U.S.P.Q.2d 1051, 1053 (Fed. Cir. 1987)).

Claim 1 of the present application currently requires:

A system comprising:

 a light source capable of emitting light at a variable output power to transmit data at a given data rate;

a monitor diode positioned to receive at least a portion of the emitted light, *the monitor diode comprising a PIN diode having a bandwidth only partially overlapping a lower end of a data transmission spectrum for the data rate*; and

a controller capable of determining an average output power of the light source based on an output signal of the monitor diode, *comparing the average output power to a target value, and adjusting the variable output power of the light source by:*

incrementing or decrementing a logical 1 level current based on the comparison of the average output power to the target value; and

determining a modulation current for the light source using the incremented or decremented logical 1 level current. (emphasis added).

In the June 11, 2007 Advisory Action, the Office simply states that “the examiner maintains that the cited prior art meets the limitations of the claimed invention as noted in the final office action.” The Applicants respectfully request favorable reconsideration of the following.

First, *Kimmitt*, fails to teach or disclose “a monitor diode positioned to receive at least a portion of the emitted light, the monitor diode comprising a PIN diode having *a bandwidth only partially overlapping a lower end of a data transmission spectrum for the data rate*”, as currently required by Claim 1 and its dependents Claims 2 and 4-7. (emphasis added). *Kimmitt*, in fact, teaches *superimposing* a low frequency signal on normal high frequency data. Although photo detector 58 then needs to sense the low frequency signal, the bandwidth of photo detector 58 must still be sufficient to cover the *entire* desired signal (i.e., a 3 kHz tone). (*Kimmitt*, paragraphs [0009], [0033] and [0036]).

Accordingly, contrary to the Examiner’s apparent suggestion that photo detector 58 is not analogous to the “monitor diode” required by Claim 1. *Kimmitt* clearly fails to teach or disclose any monitor diode, let alone a PIN diode, having a *bandwidth only partially overlapping a lower end of a data transmission spectrum for the data rate*, as required by Claim 1 (and its dependents Claims 2

and 4-7). (*Id.* at paragraph [0040]). Moreover, at the very most, *Kimmitt* teaches that the optical output of the modulator is samples using a coupler, and the sampled optical signal is converted to an electrical signal by a detector such as a PIN diode. (*Id.* at paragraph [0030]). Although *Kimmitt* goes on to teach that the electrical signal is then passed through a low-frequency filter to recover only the modulating tone if present, there is no teaching within *Kimmitt* of a monitor diode comprising *a PIN diode having a bandwidth only partially overlapping a lower end of a data transmission spectrum for the data rate*, as required by Claim 1 (and its dependents, Claims 2 and 4-7).

Second, *Kimmitt* fails to teach or disclose “a controller capable of *determining an average output power of the light source based on an output signal of the monitor diode*, comparing the average output power to a target value, and adjusting the variable output power of the light source”, as currently required by Claim 1 and its dependents Claims 2 and 4-7. (emphasis added). Although the Office cites to paragraph [0031] for support, *Kimmitt*, at the very most, teaches that the symmetry of the modulator transfer function and the data waveform produce a null in the amplitude modulation on the optical output power when the bias point is at the quadrature point. (*Id.* at paragraph [0030]). Furthermore, *Kimmitt* teaches that the modulator controller 42 monitors the output optical power via the optical feedback signal 39 and maintains a desired value of the data bias signal for the Data Modulator (DM) 38. (*Id.* at paragraph [0038]).

Third, although the Office appears to suggest that *Kimmitt* teaches maintaining a “quadrature point” throughout, there is, however, no teaching or disclosure within *Kimmitt* of a controller capable of determining an average output power of the light source *based on an output signal of the monitor*

diode, comparing the average output power to a target value, and *adjusting the variable output power of the light source*, as required by Claim 1 (and its dependents, Claims 2 and 4-7).

Kimmitt therefore fails to teach each and every element required by Claim 1 (and its dependents, Claims 2 and 4-7). Similar arguments hold true for independent Claims 9 and 15 (and their respective dependents 10, 12-16 and 18-20). Accordingly, the Applicant respectfully requests the Examiner to withdraw the §102 rejection with respect to these claims.

Accordingly, the Applicants respectfully request the Examiner to withdraw the §102 rejection with respect to these claims.

II. CLAIM REJECTION UNDER 35 U.S.C. §103

Claims 3, 11 and 17 were rejected under 35 U.S.C. §103(a) as being unpatentable over *Kimmitt*. In addition, Claim 8 was rejected under 35 U.S.C. §103(a) as being unpatentable over *Kimmitt* in view of U.S. Patent No. 7,065,303 to *Kerem*, hereinafter “*Kerem*”. This rejection is respectfully traversed.

In *ex parte* examination of patent applications, the Patent Office bears the burden of establishing a *prima facie* case of obviousness. MPEP §2142, p. 2100-125 (8th ed., rev. 5, August 2006). Absent such a *prima facie* case, the applicant is under no obligation to produce evidence of nonobviousness. *Id.* To establish a *prima facie* case of obviousness, three basic criteria must be met: *Id.* First, there must be some suggestion or motivation, either in the references themselves or in the knowledge generally available to one of ordinary skill in the art, to modify the reference or to

combine reference teachings. *Id.* Second, there must be a reasonable expectation of success. *Id.* Finally, the prior art reference (or references when combined) must teach or suggest all the claim limitations. *Id.* The teaching or suggestion to make the claimed combination and the reasonable expectation of success must both be found in the prior art, and not based on applicant's disclosure. *Id.*

Claims 3, 11 and 17 depend from allowable Claims 1, 9 and 15, respectively. Claims 3, 11 and 17 are therefore also allowable for the reasons shown above. Similarly, Claim 8 depends from Claim 1 and is therefore also allowable for the reasons shown above. In addition, *Kimmitt*, either alone or in any combination with *Kerem*, fails to teach or disclose, for example, a monitor diode comprising a PIN diode having a *bandwidth only partially overlapping a lower end of a data transmission spectrum for the data rate*, as required by Claim 1 and ultimately by Claim 3.

Moreover, there is no suggestion or motivation within either reference to prompt one of ordinary skill to selectively combine discrete elements from *Kimmitt* and *Kerem*, respectively, and then *seek out* still others as required by Claim 1 and ultimately by Claim 3. Similar arguments exist for Claim 8, 11 and 17.

Accordingly, the Applicants respectfully request the Office to withdraw the §103 rejection with respect to these claims.

CONCLUSION

As a result of the foregoing, the Applicants assert that the remaining claims in the Application are in condition for allowance, and respectfully requests that this Application be passed to issue.

If any issues arise, or if the Examiner has any suggestions for expediting allowance of this Application, the Applicants respectfully invite the Examiner to contact the undersigned at the telephone number indicated below or at *wmunck@munckbutrus.com*.

The Commissioner is hereby authorized to charge any additional fees connected with this communication or credit any overpayment to Deposit Account No. 50-0208.

Respectfully submitted,

MUNCK BUTRUS P.C.

Date:

July 23, 2007



William A. Munck

Registration No. 39,308

P.O. Drawer 800889
Dallas, Texas 75380
(972) 628-3600 (main number)
(972) 628-3616 (fax)
E-mail: *wmunck@munckbutrus.com*